

FIG.1

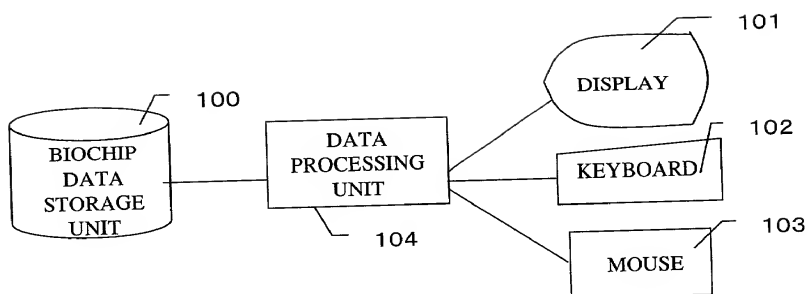


FIG.2

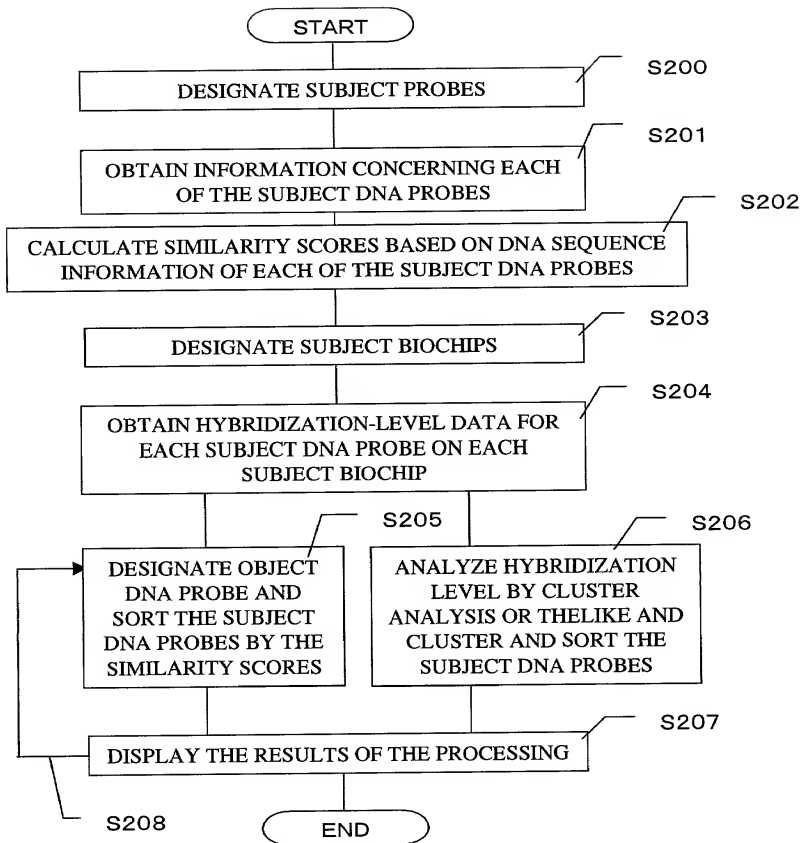


FIG.3

EXAMPLE OF DATA STRUCTURE

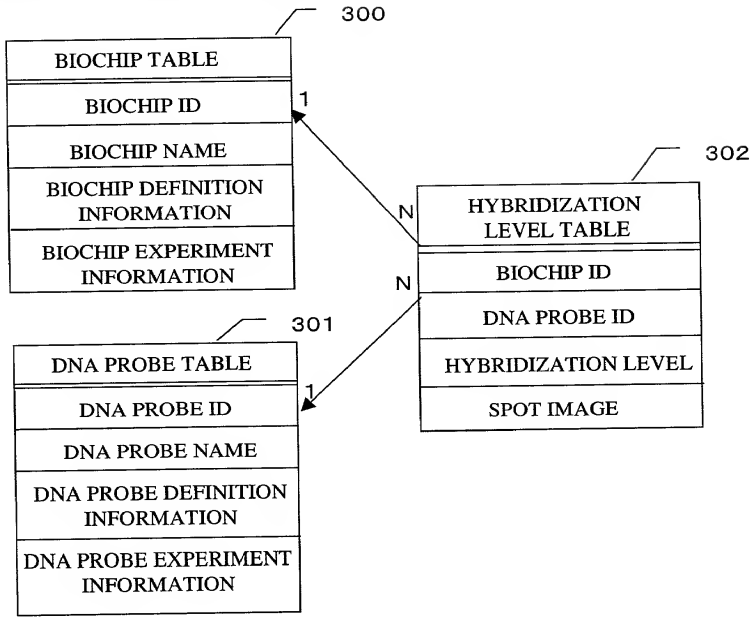


FIG.4

300 EXAMPLE OF BIOCHIP DATA

| BIOCHIP ID | BIOCHIP NAME | BIOCHIP DEFINITION INFORMATION | BIOCHIP EXPERIMENT INFORMATION |
|------------|--------------|--------------------------------|--------------------------------|
| 1 | Chip 1 | Definition about Chip 1 | Sample from the Stage A (1D) |
| 2 | Chip 2 | Definition about Chip 2 | Sample from the Stage B (3D) |
| 3 | Chip 3 | Definition about Probe 3 | Sample from the Stage C (1W) |
| : | : | : | |
| n | Chip n | Definition about Chip n | not used. |

FIG.5

301 EXAMPLE OF DNA PROBE DATA

| DNA PROBE ID | DNA PROBE NAME | DNA PROBE DEFINITION INFORMATION | DNA PROBE SEQUENCE |
|--------------|----------------|----------------------------------|----------------------|
| 1 | Probe1 | Definition about Probe 1 | ACGGGACGTTCCCTCGGAGG |
| 2 | Probe2 | Definition about Probe 2 | ACGGGACGTTCCCCCGGAGG |
| 3 | Probe3 | Definition about Probe 3 | TTGGACGTTCCAATAGAGG |
| 4 | Probe4 | Definition about Probe 4 | TTGGACGTTCCAATAGGGG |
| 5 | Probe5 | Definition about Probe 5 | TTGGGACGTTCCAATAGGAG |
| : | : | : | : |
| m | Probe m | Definition about Probe n | TTGGGACGTTCCAATAGGAG |

FIG.6

EXAMPLE OF HYBRIDIZATION-LEVEL DATA















| 302a | | | | 302b | | | | 302c | | | |
|------------|--------------|---------------------|---|------------|--------------|---------------------|---|------------|--------------|---------------------|---|
| BIOCHIP ID | DNA PROBE ID | HYBRIDIZATION LEVEL | SPOT IMAGE | BIOCHIP ID | DNA PROBE ID | HYBRIDIZATION LEVEL | SPOT IMAGE | BIOCHIP ID | DNA PROBE ID | HYBRIDIZATION LEVEL | SPOT IMAGE |
| 1 | 1 | 31,916 |  | 2 | 1 | 43,416 |  | 3 | 1 | 21,916 |  |
| 1 | 2 | 224 | | 2 | 2 | 41,224 |  | 3 | 2 | 11,224 |  |
| 1 | 3 | 41,231 |  | 2 | 3 | 2,107 |  | 3 | 3 | 10,007 |  |
| 1 | 4 | 24,107 |  | 2 | 4 | 25,307 |  | 3 | 4 | 21,107 |  |
| 1 | 5 | 9,607 |  | 2 | 5 | 1,807 | | 3 | 5 | 1,507 | |
| : | : | : | | : | : | : | | : | : | : | |
| 1 | m | 9,753 |  | 2 | m | 853 | | 3 | m | 5,753 |  |

FIG.7

EXAMPLE OF CALCULATED SIMILARITY SCORES

| Target \ Key | Probe 1 | Probe2 | Probe3 | Probe4 | Probe5 |
|--------------|---------|--------|--------|--------|--------|
| Probe1 | 80 | 76 | 40 | 56 | 44 |
| Probe2 | 76 | 80 | 44 | 52 | 44 |
| Probe3 | 40 | 44 | 80 | 36 | 52 |
| Probe4 | 56 | 52 | 36 | 80 | 48 |
| Probe5 | 44 | 44 | 52 | 48 | 80 |

FIG.8

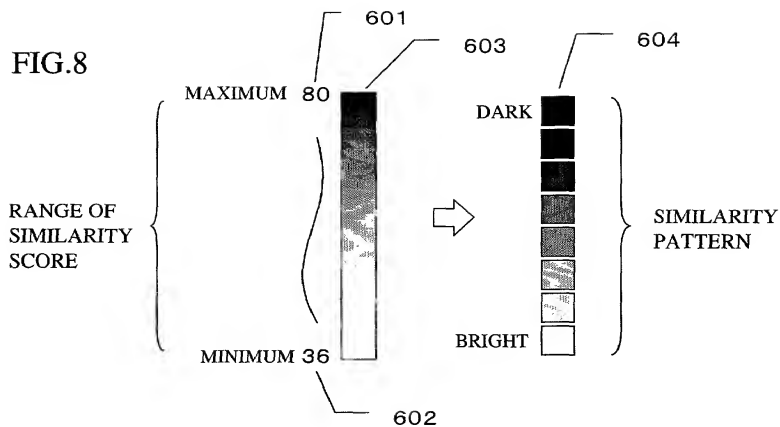


FIG.9

| 301 | | | | 605 | 606 |
|--------------|----------------|----------------------------------|----------------------|------------------|--------------------|
| DNA PROBE ID | DNA PROBE NAME | DNA PROBE DEFINITION INFORMATION | DNA PROBE SEQUENCE | SIMILARITY SCORE | SIMILARITY PATTERN |
| 1 | Probe1 | Definition about Probe 1 | ACGGGACGTTCCCTCGGAGG | 80 | |
| 2 | Probe2 | Definition about Probe 2 | ACGGGACGTTCCCCCGGAGG | 76 | |
| 3 | Probe3 | Definition about Probe 3 | TTGGACGTTCCAATAGAGG | 40 | |
| 4 | Probe4 | Definition about Probe 4 | TTGGACGTTCCAATAGGGG | 56 | |
| 5 | Probe5 | Definition about Probe 5 | TTGGGACGTTCCAATAGGAG | 44 | |
| : | : | : | : | | |
| m | Probe m | Definition about Probe n | TTGGGACGTTCCAATAG... | nn | |

*Similarity score is a similarity score of each of the DNA probes with respect to the DNA probe:ID 1.

FIG.10

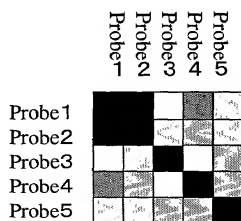


FIG.11

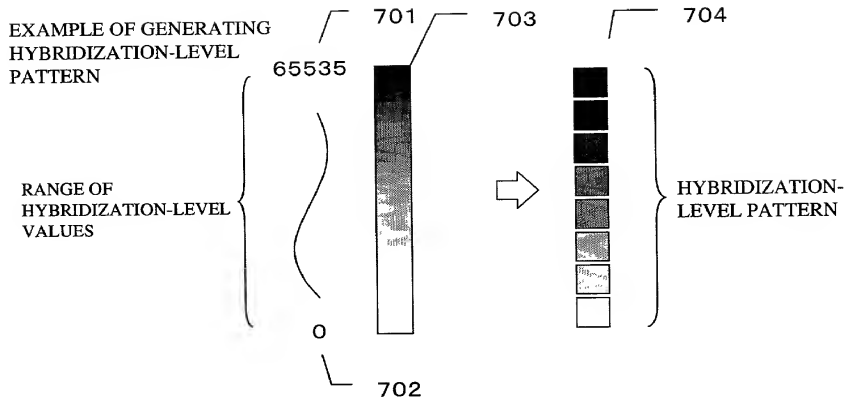


FIG.12

EXAMPLE OF CONVERTING HYBRIDIZATION-LEVEL PATTERN

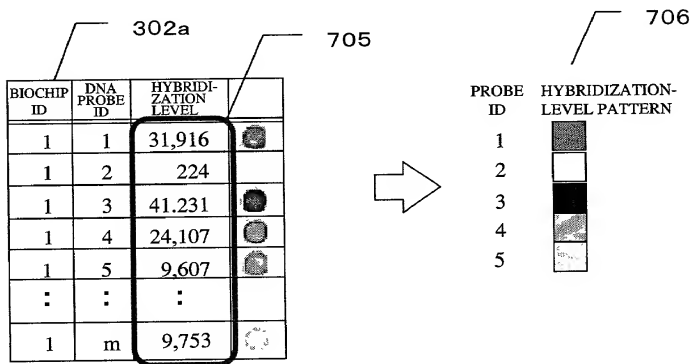


FIG.13

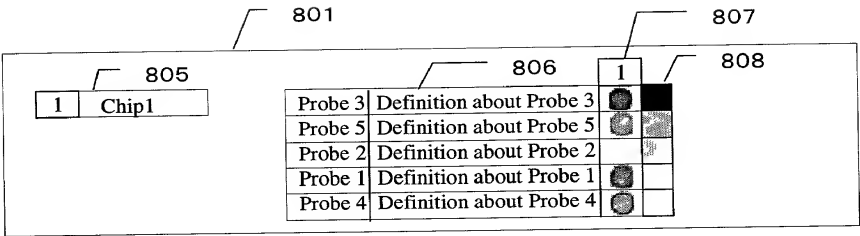


FIG.14

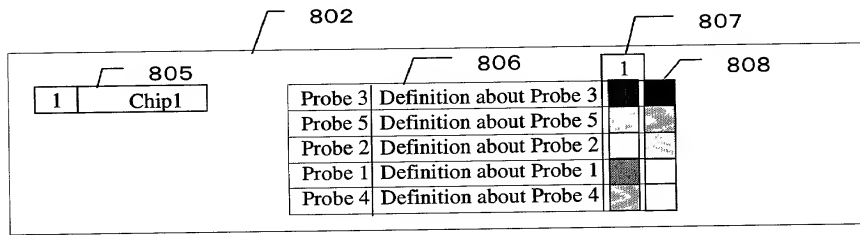


FIG.15

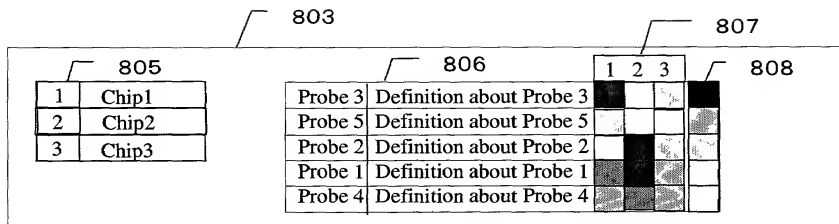


FIG.16

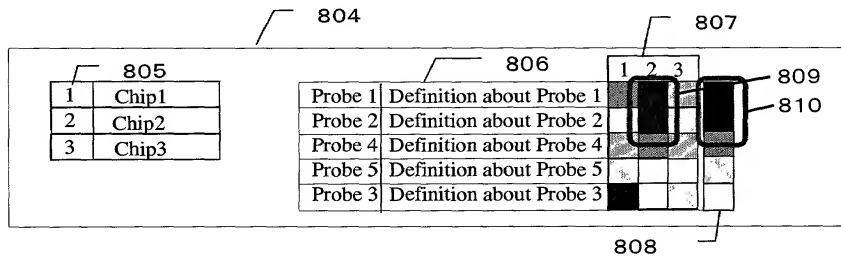
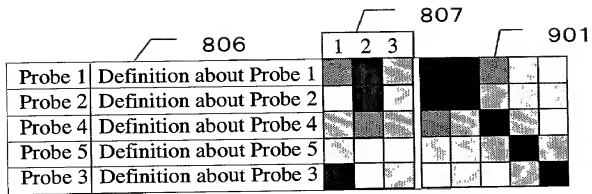
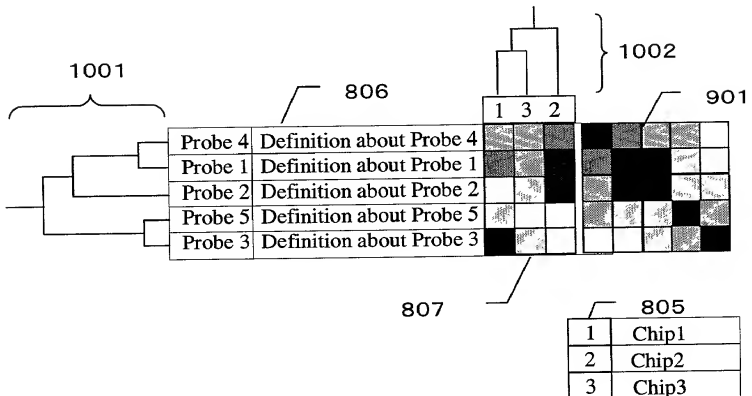


FIG.17



| | |
|---|-------|
| 1 | Chip1 |
| 2 | Chip2 |
| 3 | Chip3 |

FIG.18



| | |
|---|-------|
| 1 | Chip1 |
| 2 | Chip2 |
| 3 | Chip3 |